Motivation Profiles of Online Poker Players and the Role of Interface Preferences: A Laddering Study among Amateur and (Semi-) Professionals

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Abstract[1]

Online Poker has become an increasingly popular form of gambling. In this study, the qualitative method of laddering interviews based on means-end chain theory was used to offer new insights in online Poker players' psychological motives, and the way in which Poker website characteristics shape gambling preferences. A total of 18 Belgian young adults, experienced in Poker playing, were recruited via snowball sampling, of which 6 professionals (relying on online Poker as the sole source of income), 6 semi-professionals (playing for money, but not relying on it as a sole source of income) and 6 amateurs (not relying on Poker money for income). We focused on 2 Poker websites, PokerStars and Facebook Zynga Poker. Results revealed that an increase in the dependency on Poker profits shifted motives from learning towards monetary incentives. Yet, playing for real money could not be considered as a purely extrinsic motivation as it greatly determined the game play dynamics and experiences, and this both in the (semi-) professionals and amateur players. Finally, our study indicates that responsible gaming features should reconcile monetary worth with values of control, trust, entertainment and game play action.

Keywords: Online Poker; Qualitative; Motivations; Human-Computer Interaction; Media choice; Means-end chain theory

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In the last decade, the popularity of online Poker has surged. From the different types of gambling games played on the Internet, Poker is the fastest growing form (Griffiths, Parke, Wood, & Rigbye, 2010). In general, the rise of Internet gambling has resulted in a number of recent studies, of which many have investigated how new forms of gambling online differ from their offline counterpart (see, e.g., Cotte & Latour, 2009; Gainsbury, Wood, Russell, Hing, & Blaszczynski, 2012; Jiménez-Murcia et al., 2011; Szabó & Kocsis, 2012; Wardle, Moody, Griffiths, Orford, & Volberg, 2011; Robert Wood, Williams, & Lawton, 2007; Robert Wood & Williams, 2011; MacKay, Bard, Bowling, & Hodgins, 2014). Additionally, an increasing number of studies have assessed or predicted the potential risks of online gambling (see, e.g., Clement et al., 2012; Cotte & Latour, 2009; Dickson, Derevensky, & Gupta, 2008; Dragicevic et al., 2011; Griffiths, Wood, & Parke, 2009; Hopley & Nicki, 2010; Jiménez-Murcia et al., 2011; Johansson, Grant, Kim, Odlaug, & Götestam, 2009; Lloyd et al., 2010; Matthews, Farnsworth, & Griffiths, 2009; Szabó & Kocsis, 2012). These insights have fuelled the debate on how to define and implement responsible gambling policies, regulation and consumer protection (see, e.g.,Gainsbury, Parke, & Suhonen, 2013; Gainsbury & Wood, 2011; Griffiths, Wood, et al., 2009; Haefeli, Lischer, & Schwarz, 2011; Khazaal et al., 2013; Smeaton & Griffiths, 2004).

Although the number of studies on online gambling is on the rise, only a few have focused on online Poker (Palomäki, Laakasuo, & Salmela, 2012). Most studies have drawn conclusions with respect to the more generic phenomenon of online gambling instead (see, e.g., Griffiths, Wardle, Orford, Sproston, & Erens, 2009; Haefeli et al., 2011; Jolley, Mizerski, & Olaru, 2006; LaBrie, Kaplan, LaPlante, Nelson, & Shaffer, 2008; LaBrie, LaPlante, Nelson, Schumann, & Shaffer, 2007; Lloyd et al., 2010; McBride & Derevensky, 2009; McCormack &

Griffiths, 2012), and therefore need to be complemented with studies particularly dedicated to unravelling how online Poker players construct their own experiences (Woolley, 2003, p. 17). In this article, we will show that the existing literature on the differences in motivations endorsed for playing Poker between amateur and professional players has not yet yielded univocal results, and therefore may benefit from further work. Hence, our first research question is the following:

Research Question 1 (RQ1): "What are the dominant motivations endorsed for playing online Poker in amateur, semi-professional and professional players?

Additionally, more research is needed to understand the role of website features, and the way these are being perceived and experienced in shaping online Poker motivations. Even though it is being acknowledged that website characteristics can be decisive factors for gambling behaviour (Dragicevic et al., 2011), how online Poker motivations are being mediated by both website characteristics and player characteristics remains a void in the research field. Therefore, our second research question reads as follows:

Research Question 2 (RQ2): "How do online Poker motivations relate to interface preferences in amateur, semi-professional and professional players?"

In sum, the contribution of this study lies within its focus on the scarcely studied subfield of online Poker. To our knowledge, this is the first study that analyses motivations of online Poker players in relation to the design characteristics of Poker websites. It hereby provides a qualitative, in-depth understanding of the online Poker experience in amateur and (semi-) professional players, which complements the majority of quantitative studies that have focused on assessing or predicting risk effects for online gambling in amateur players. By analysing the actual experiences with Poker websites, we will throw a more nuanced light on instances of what is likely to be a priori considered as problematic Internet behaviour, and formulate well-informed

suggestions for responsible gaming features. Eventually, we will show that Poker players esteem legality and trust, and argue that responsible gaming features should cleverly respond to the players' need to reconcile monetary worth with values of control, entertainment and game play action.

2. Literature Review

2.1 Motivations for (Online) Gambling and (Online) Poker

Table 1 provides an overview of previous work on the motivations endorsed for (online) gambling in general and (online) Poker in particular. It reveals six main motivations that have repeatedly been reported on, namely the mitigation of negative emotions, financial gains, stimulation of positive emotions, occurrence of sociality, the possibility for practice and improving skills, and the convenience of being online. While these motivations are shared across (online) Poker and other forms of (online) gambling (see Table 1), the skill factor inherent to Poker seems to be the most important reason why certain players, and especially the professional ones, prefer Poker to other kinds of gambling.

Motivation (Online) Gambling	Aspects	References
Mitigation Neg. Emotions	Mood regulation, relaxation, escape from problems, relieve anxiety, avoidance, relieve boredom	*(Online) Gambling* (Lee, Chae, Lee, & Kim, 2007; Lloyd et al., 2010; McBride & Derevensky, 2009) – *(Online) Poker* (Richard Wood, Griffiths, & Parke, 2007; Richard Wood & Griffiths, 2008)
Financial Gains	Source of income, playing for money, better odds of winning	*(Online) Gambling* (Lee et al., 2007; Lloyd et al., 2010; McCormack & Griffiths, 2012) – *(Online) Poker* (Griffiths et al., 2010; Will Shead et al., 2008; Richard Wood et al., 2007; Richard Wood & Griffiths, 2008)
Positive Emotions	Enjoyment, fun, thrill, excitement, entertainment, amusement, feel lucky	*(Online) Gambling* (Lee et al., 2007; Lloyd et al., 2010; McBride & Derevensky, 2009) - – *(Online) Poker* (Will Shead et al., 2008; Richard Wood et al., 2007)
Sociality	Because friends/family	*(Online) Gambling* (Griffiths & Barnes,

	members do, to be with friends or to make new friends	2008; Lee et al., 2007; Lloyd et al., 2010; McBride & Derevensky, 2009) – *(Online) Poker* (Griffiths et al., 2010; Will Shead et al., 2008; Richard Wood & Griffiths, 2008)
Practice & Skills	To learn strategies, to practice, having the opportunity to gamble, develop skill, learning environment, ease of learning	*(Online) Gambling* (McBride & Derevensky, 2009; McCormack & Griffiths, 2012) – *(Online) Poker* (Griffiths et al., 2010; Will Shead et al., 2008; Richard Wood et al., 2007; Richard Wood & Griffiths, 2008)
Convenience	Ease of access, flexibility, 24-h availability, anonymity, greater variety of games, large gambling choice, because it is easier, because of time and software, because you can play for free, because of the low stake size, because of the ability to multitask with non-poker related activities	*(Online) Gambling* (Griffiths & Barnes, 2008; McCormack & Griffiths, 2012) – *(Online) Poker* (Griffiths et al., 2010; Will Shead et al., 2008; Richard Wood & Griffiths, 2008)

Table 1 An overview of the main motivations endorsed for (online) gambling, incl. Poker.

Focusing on the studies that have reported on the motivations for (online) Poker, Shead et al. (2008) have found in an online survey on gambling that undergraduate student Poker players preferred Poker to other forms of gambling because of four main reasons: the skill factor, sociality, entertainment, and the fact that Poker is easier or has better odds of winning. The majority of the respondents reported having started playing Poker because their friends were playing. Further, the results have suggested that professional players, or the ones who spent greater proportions of time playing Poker online, were more likely to prefer Poker to other forms of gaming because of the skill factor, whereas the casual players were more likely to prefer it for the socializing benefits (Shead et al., 2008).

In an online questionnaire that was distributed among university students who played online Poker, Griffiths et al. (2010) have found that convenience (i.e., aspects related to easy-to-use software), source of income, learning environment/playing for free, social elements, and the

ability to multitask with non-Poker related activities were important motivations for playing online Poker. Wood et al. (2007) have also focused on the motivations endorsed for playing online Poker. The results of an online survey in a self-selected sample of about 400 UK student online Poker players revealed that players engaged in the online Poker game for reasons of relaxation, excitement, for monetary reasons, to escape from problems, to relieve boredom, develop skills or feel lucky (Richard Wood et al., 2007).

In 2008, Wood and Griffiths published a study in which 24 Swedish online Poker players were researched via focus groups (Richard Wood & Griffiths, 2008). The researchers did not only focus their attention on the motivations but also on the differences between casual and professional players. Comparing these results to Shead and colleagues' (2008) observed differences for casual gamblers, Wood & Griffiths added, next to social factors, reasons related to convenience, ease of learning, low stake size, and relief from boredom. As aforementioned, according to Shead et al. (2008), professionals mainly played online Poker because of the skill factor, whereas Richard Wood and colleague (2008) found that professional players mainly played to win money.

Our literature review revealed that insights into the way online Poker players construct their own experiences and the reasons endorsed for playing as an amateur or (semi-) professional are scarce and not always univocal. Yet, motivational analyses are crucial to develop a better understanding of the inherent properties of gambling games (Chantal & Vallerand, 1996) and Internet gambling (Woolley, 2003, p. 17). More particularly, there is a need to understand the phenomenon of online Poker in relation to the particularities of Poker websites (Dragicevic et al., 2011). For instance, it is important to understand which website attributes trigger monetary values, whether the website's legality and online service are being valued, whether the 24/7,

global and anonymous play environment facilitate problematic Internet behaviour, or whether embedded social dynamics are considered as important features. As will be described in the next section, the means-end chain (MEC) theory is providing us with a theoretical lens to understand this complex interplay between people's motivations on the one hand, and the perceived value of important consumed product features on the other –or in this study, between the online Poker players' psychological motives and website interface preferences-.

2.2 Means-End Chain Theory

Means-end chain theory (Gutman, 1982) deals with the linkages between product attributes (also termed the means, and in this study referring to website features) on the one hand, and consequences of product use and personal values (also termed the ends, in this study referring to the motivations of online Poker players) on the other hand. The common generic means-end chain consists of product attributes (A), consequences (C), and values (V) (see Figure 1).

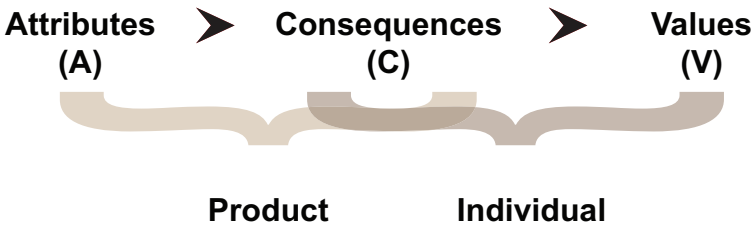

Figure 1 *The common generic means-end chain, consisting of product attributes (A), consequences (C), and values (V).*

The main assumption behind MEC theory is that people choose products, not necessarily because of the actual product attributes, but rather because of what these attributes can do for them in a particular situation. In our study, the connection between medium specifics, game experiences and player values comes to the surface by means of laddering interviews. To our knowledge, it is the first time laddering interviews are used in this context. The qualitative

aspects of our approach may serve as an addition to most previous studies on online Poker motivations that have been relying on (online) surveys or behavioural data measures (see, e.g., Griffiths et al., 2010; Hopley & Nicki, 2010; Palomäki et al., 2012; Shead, et al., 2008; Robert Wood et al., 2007). More particularly, this study can be typified as a uses & gratifications (U&G) study rather than an effect study. The common premise of U&G and MEC theory is that people learn to choose a product (or medium) because it contains attributes that are instrumental to achieving desired consequences and fulfilling values (Palmgreen & Rayburn, 1985; Vanden Abeele & Zaman, 2008). It implies an underlying, fundamental assumption of an active audience, who has perceptions of the gratifications available from various alternatives and acts upon these perceptions (Palmgreen & Rayburn, 1985). The expectancies or beliefs about the product attributes can be learned and modified through direct experience, or can be the result of communication and processes of induction and deduction (Palmgreen & Rayburn, 1985).

Means-end chain analysis is preferably done via laddering (Grunert & Bechlarsen, 2005). Laddering involves a tailored interviewing format that can be considered as a structured one-on-one depth interview technique, used to develop an understanding of how people translate the attributes of a preferred product into meaningful associations with the individual self (i.e., the consequences or values, see Figure 1). Interviewees are first instructed to indicate desired product features. Next, they are asked why these features are important to them. The interviewer continuously probes for higher-level constructs that the interviewees express to explain their motivations, asking typical laddering questions such as “Why do you prefer this?”, “Why is this feature important to you?”. Interviewees are then encouraged to climb up the ladder from concrete product attributes to more abstract personal values to provide an understanding of the linkages between preferred product features and the motivational perspective to acquire and use

this product. The goal is not only to identify linkages between key perceptual elements across the ladder of attributes, consequences, and values for each individual participant, but also, eventually, to reveal the dominant means-end chains at the aggregate level of a group of participants. In this way, the laddering approach aligns well with our research aspirations that are aimed at revealing the dominant motivational profiles in the groups of amateur versus (semi-) professional players (cf. RQ1) as well as understanding how online Poker motivations relate to interface preferences and form particular means-end chains (cf. RQ2).

3. Method

3.1 Participants

Hayano's typology of offline Poker players was adopted (1977, p. 558) to recruit 18 participants who could be categorized as professional (*n*=6), semi-professional (*n*=6) or amateur Poker players (*n*=6). The group of professional players was defined as relying on online Poker as main source of income. The semi-professionals were characterized as those who earned money from online Poker without having this as main occupation. Finally, the last group consisted of the amateur online Poker players who were also experienced Poker players but, however, were not dependent on generating Poker profits. Via snowball sampling, we selected a total of 18 Belgian young adults of which six for each Poker player category. This non-probability technique, also known as chain referral sampling, is often an appropriate way to identify participants with specific characteristics needed for a study, especially when populations are difficult to trace or when sensitive topics (such as gambling) are dealt with (Berg, 2009). Our first contacts were used to widen the sample (snowballing) and to contact referrals who possessed the same attributes (i.e. playing online Poker and being (in)dependent of Poker profits) as indicated by our first participants and thereby fulfilling the inclusion criteria. The ages of our participants varied

between 18 and 28 years, with an average age of 25. From the available responses, we only succeeded in including 1 woman, against a majority of 17 male online players. The overrepresentation of male Poker players may be due to the fact that males are significantly more likely to gamble online than females (Griffiths, Wardle, et al., 2009; McBride & Derevensky, 2009, p. 154; Shead et al., 2008). Moreover, according to the British Gambling Prevalence Survey, Internet gamblers are also more likely to be young, well-educated adults (Gainsbury & Wood, 2011), which may partly explain our selection of all higher educated participants.

3.2 Materials

Two distinct online Poker games were selected for their potential to elicit a meaningful choice context, PokerStars and Facebook Zynga Poker. The PokerStars website encompasses several Poker game variations. By contrast, Facebook Zynga Poker is limited to only one variant, which is Texas Hold'em No Limit with the possibility of exercise money. Texas Hold'em No Limit is currently the most played and most popular version of Poker (Bradley & Schroeder, 2009; Clement et al., 2012; Richard Wood & Griffiths, 2008). Because of its integration in Facebook, Zynga Poker also features more social visibility, and less anonymity, contrary to the PokerStars' implementation.

3.3 Procedure

All participants gave their prior consent to record the interviews and use the anonymized data for scientific research purposes. The same interviewer (one of the authors of this article) conducted all interviews. Each interview began with an explanation of the goals of the study and the structure of the laddering interview method. Then, the interviewees were asked to indicate their preference between PokerStars and Facebook Zynga Poker. If the participants were not familiar with one of the two websites, they were requested to familiarize themselves with it

before the interview. The actual interviews lasted between 35 and 75 minutes with an average length of 50.5 minutes. The main focus of each individual interview was the interviewee's account of his/her motivation(s) to prefer either PokerStars or Facebook Zynga Poker. Interviewees were asked to indicate the preferred attributes of the selected website and were prompted to explain themselves further.

3.4 Analysis

All the interviews were audio recorded and transcribed verbatim by the interviewer. NVivo software was used for the qualitative analysis of the laddering interviews. The qualitative laddering data analysis resembled a grounded theory approach (Glaser & Strauss, 1967) in that the coding was grounded in actual data, i.e., after the data collection rather than imposed a priori. The researcher who performed the interviews and transcriptions started the analysis by open coding, generating and applying as many codes as needed to catalogue the relevant parts of the transcriptions. After open coding, the codes were discussed with a second coder, who is also a co-author of this article. This resulted in revisiting the codes to develop a smaller number of, mostly higher ordered, categories. A discussion of the second list of codes took place, which resulted in the final revised coding scheme of 31 codes (see Table 2).

Code	Label	Description
Attributes		
1	Additional features	Features such as hand history, time bank, search function with filters, multi-tabling, bar with results…
2	Variety of games	Online Poker game variations that are accessible through the website, e.g., Omaha Stud, 7 card Draw, ZoomPoker
3	Large user base	Number of players against whom one can play
4	Stand alone software	Software is not integrated in browser, needs to be downloaded and installed separately
5	Preferences	Interface options that impact game play and that can be adjusted to player preferences, e.g. Hotkeys, themes
6	Real money	Possibility to play for real money and not solely for exercise money
7	Compatibility	Possibility to combine the software with other supporting programs such as Hold'em Manager or Tournament Shark
8	Clarity UI elements	Visible, intuitive, clear user interface (UI), lack of disturbing, annoying animations, sounds
9	Meta data	Extra information obtained via supporting software, on which players can rely to form better informed game strategies
10	Finding players	Possibility to find other players and friends via search functionalities in the interface

11	Promotions	Actions offered by the website such as free tournaments or events, including advertisements
12	Speed of software	Speed of starting up the software, speed of the animations, or the speed by which hands are being played
13	Service and support	Service provided by the Poker organization, related to the correctness and speed of cashing the money that was won
Consequences		
14	Seriousness	Associating the Poker site with high game level with high number of professional players
15	Legality and safety	Guaranteeing safe flows of money; website is being licensed and therefore acting legally
16	Focus	Being able to concentrate on the game
17	Optimal game play	Being able to take better decisions, playing better, experiencing the game interface as more calming
18	Fastness	Playing faster, being able to do more actions
19	Hands an hour	Being able to play more hands an hour
20	Profit maximization	Being able to increase the hourly wage and maximize profit
21	Convenience	Experiencing ease of use, usability
22	Action	Increasing action at the table, or the general level of action on a Poker site
23	Trust and loyalty	Trusting the website, e.g., as a result of the perceived safety, and the related loyalty with respect to a particular website
24	Learning	Being able to learn, e.g., via observing other players or asking them for explanations
25	Skills instead of luck	Perceiving that skills make a difference and players act more rational
26	Play with friends	Enjoying to play with friends, see for instance the social options in ‘home games’
Values		
27	Challenge	Being challenged, avoiding boredom, competitiveness
28	Variation	There is something for everybody, variation
29	Earn more	The motivation to earn more money
30	Entertainment	Amusement, having fun
31	Better life	Possibility to live a better life

Table 2 Overview of the dataset codes, classified according to means-end chain level.

Intercoder-reliability of the coding scheme and composed ladders was measured on a random selection of six interviews, two from each type of online Poker players. The second coder was instructed to recreate the individual ladders based on the coding scheme in the order of the elements’ appearance throughout the transcribed interview (k = .934).

In addition to the initial qualitative data treatment, the laddering method provides in a subsequent quantitative data analysis. To treat our data quantitatively, all individual ladders were first summarized in the score matrix, which provided an overview of all ladders of each individual interviewee. In total, 141 ladders were constructed, with on average 3.72 elements (one element being either an attribute, consequence or value) per ladder, and an average of 7.83

ladders per interviewee. Then, a matrix was generated that obtained an overview of all indirect and direct links between the elements, over all ladders of the interviewees. A direct link consisted of two adjacent elements; an indirect link consisted of two non-adjacent elements in the same ladder. The greater the sum of indirect and direct links, the more dominant the associations were between those elements. The dataset included a total of 793 links, of which 384 direct links and 409 indirect links. Finally, Hierarchical Value Maps (HVMs) were generated to visualize the dominant means-end chains at the aggregate level for a group of interviewees (see, Results section 4, Figure 2, 3, and 4 for respectively the HVMs of the amateur, semi-professional and professional players). These HVMs represented visual summaries of the dominant motivational patterns or, in other words, the linkages between attributes, consequences and values that were most explanatory for website preferences. In order to summarize, cut-off levels were used. Only elements with link strengths above the cut-off level were retained. For the selection of cut-off levels, we followed the rule of thumb that approximately two thirds of the data should be retained (Reynolds & Gutman, 2001).

4. Results

Surprisingly, the results revealed the occurrence of unanimity among all participants with respect to the preference for PokerStars. As laddering results focus on the dominant motivations for the preferred product, it is important to note that the following sections will relate to the reasons endorsed for preferring PokerStars.

4.1 Amateurs' Means-End Chains

When deliberately considering the two Poker websites, amateur Poker players chose PokerStars in preference to Facebook Zynga Poker. Figure 2 presents the HVM for the amateur online Poker players.

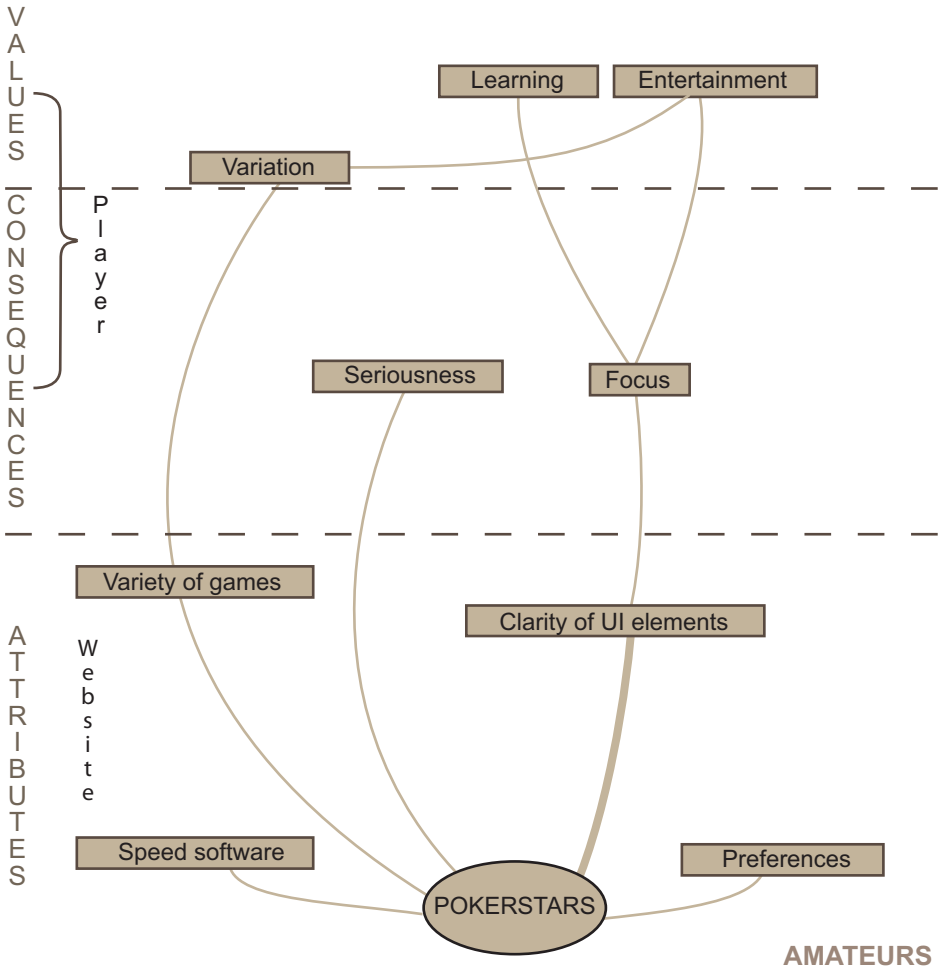

Figure 2 Hierarchical Value Map of the amateurs' dominant means-end chains, revealing the importance of the clarity of the website's user interface (UI) in preferring PokerStars to Facebook Zynga Poker. The thicker the lines, the stronger the linkages are between two elements (i.e., higher number of direct and indirect linkages reported by the interviewees).

The clarity of the user interface (UI) was the main reason why PokerStars was preferred to Facebook Zynga Poker, as indicated by thickness of the lines in the amateurs' HVM (see Figure 2). In each interview, the usability of the website was clearly referred to as the first and most important reason for preferring PokerStars. The following citations are taken from the answers to the first why-question that probed the amateurs to explain their preference for PokerStars: "First of all, the layout. PokerStars' layout provides a better overview, it's prettier, clearer, more polished, and it simply looks more professional" (Participant 10); "Plenty of reasons actually. First and foremost, Facebook [Zynga] Poker just looks really awful. It is

incredibly chaotic"(Participant 11); "For me, PokerStars offers a better view on what's going on" (Participant 12); "Because Poker isn't really a social thing to me, so um, that PokerStars looks a lot clearer to me" (Participant 13);"If I compare them, there are pros and cons for both of them, but I prefer PokerStars. I personally think that it is actually a lot clearer" (Participant 14);"Yeah, I now prefer PokerStars because I feel that it is clearer and more user-friendly than Facebook [Zynga] Poker" (Participant 15).

The clarity of the website design was favoured because it facilitated an increased focus on the game. At the ultimate end of the means-end chain spectrum, this consequence was associated with benefits of learning and entertainment, as argued by Participant 14,"It's simply more fun, you are more immersed in the game, you are not distracted by other things that are irrelevant, and that improves the entertainment value of the game itself".

Amateur players seemed to be somewhat ambiguous on the involvement in serious play. In some circumstances, they said to enjoy being highly concentrated and immersed in the Poker game because of the increased entertainment and learning opportunities. For instance, Participant 10 asserted:

> […] PokerStars is all about the game. […] Yeah, I do think that it is a more pleasant way of playing Poker. You have the sense that people are taking what they are doing really seriously. That is not the case for the other [Facebook Zynga Poker]. That one is also Poker, but there are so many other things involved, advertising and all that stuff. PokerStars is a lot less about those things. (Participant 10)

When the interviewer continued to ask why PokerStars was preferred, Participant 10 replied:

> I would say it's also about players. The players of PokerStars are serious about the game, even when it's only for practice. Even when they do not play for real money, they will take the game more seriously [than players of free poker sites]. […] It is also nicer that, if you know that you are playing with people who take the game seriously, that you can actually practice for the next time when you are playing in a casino or with your friends.

Contrarily, in other circumstances, amateur players described being happy not having to take risky decisions under time pressure, as illustrated in the interview with Participant 15:

> PokerStars is faster than Facebook [Zynga] Poker. That is nice on the one hand, because there's more action and everything goes quicker, but on the other hand, I really play for fun and that's why I like how Facebook [Zynga] Poker has a slower pace. […] PokerStars gives you a lot less time to make a decision.

The interviewer took this as a starting point to probe for more explanations by asking questions like "Why was that important to you", whereupon Participant 15 answered:

> Yes, I do not want to focus on the time I get to make a decision. I'm really just playing for fun, and I want to play it at my own pace. […] What I also prefer on Facebook [Zynga] Poker is that you can immediately see your result. It tells you when you have a flush or not, so you don't have to pay too much attention on that. [That is convenient since] I do not know all the different hand combinations that well. […] Again, it's really just for fun and I do not feel like

> having to focus on that. I want to be able to do other things, such as chatting or texting, or whatever.

The variety of different types of Poker games was perceived as important for entertainment and learning motives. For instance, Participant 10 stated, "I think that it is more interesting if you know how to play more than one type of Poker, it makes you a better Poker player. It provides you with certain insights, uhm, about human behaviour, how people respond to a certain hand, so I think that it will improve your overall Poker skills". Similarly, Participant 11 mentioned:

> I like to switch things up a bit, a bit of Texas, a bit of Omaha […] so you pick a software application or a website that offers everything. […] If not, I will quickly experience a sense of boredom […] and if I can vary a bit, then my evening will be more pleasant, my Poker experience will be more pleasant, I will be able to endure playing longer, and I think that my performance improves as well. My mind stays sharper for longer periods of time; I can focus better on what I am doing. If I would play Texas Hold'em at the same table for the entire evening, then I would drift off, get frustrated, quit sooner, and would have played less well.

In sum, the amateur players preferred PokerStars to Facebook Zynga Poker mainly because of the differences in usability and website design, and perceived these interface characteristics as beneficial for exploiting their entertainment and learning values.

4.2 Semi-professionals' Means-End Chains

The semi-professionals expressed a rather ample and balanced network of means-end chains, as shown in the HVM in Figure 3.

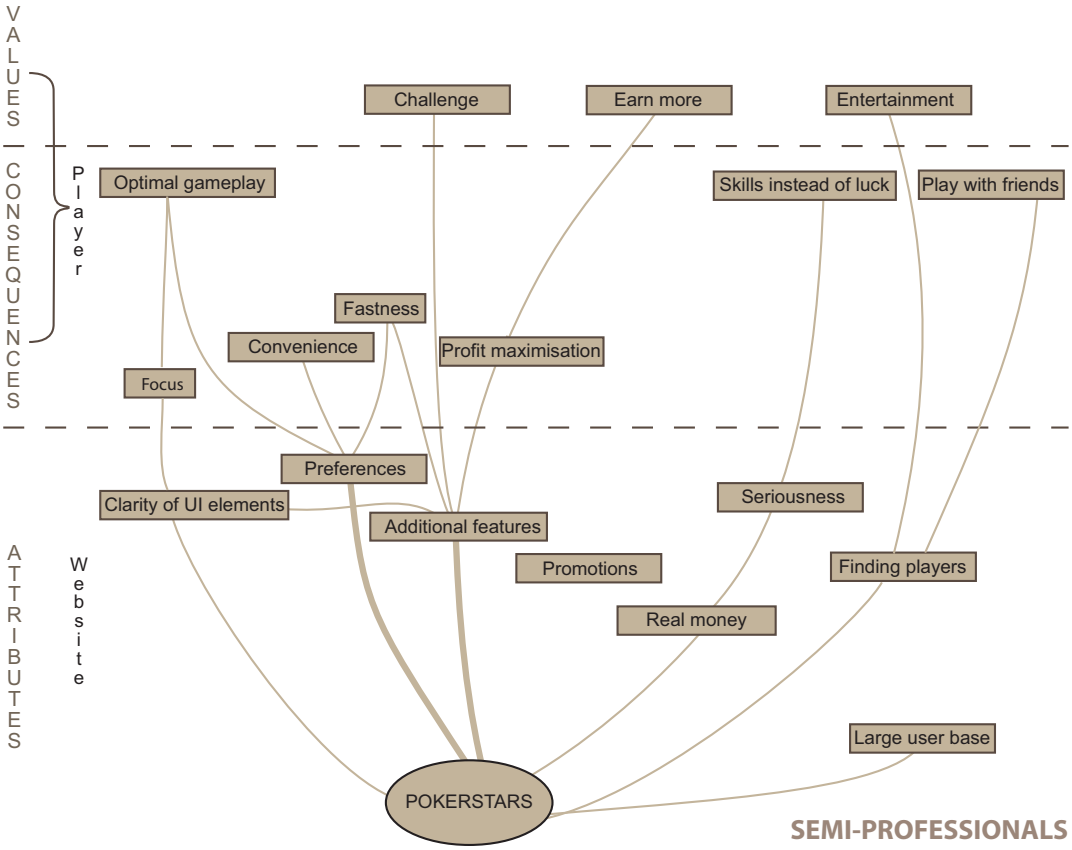

Figure 3 Hierarchical Value Map of the semi-professionals' dominant means-end chains, revealing the importance of specific website features and preferences as a means towards earning more money, being challenged and/or entertained, and this in the light of a general preference of PokerStars to Facebook Zynga Poker. The thicker the lines, the stronger the linkages are between two elements.

The two most complex and strongly interwoven means-end chains reveal how certain additional website features, such as a VIP program, hand history, time bank, search functionality with filters and multi-tabling (i.e., being able to play at more than one table simultaneously), as well as the option to adjust preferences resulted in perceived benefits related to earning more money, being challenged and/or optimal game play. In this respect, multi-tabling was an important feature. To illustrate, when the interviewer asked Participant 7: "So you said that you play more than one table. Why do you do that?", the participant responded: "It's less boring. […] Yeah, if you play more tables, you will win more in the long run. As long as you're winning, of course".

The reasons why semi-professional players preferred PokerStars to Facebook Zynga Poker could thus mainly be brought back to these differences in additional features and the options to adjust preferences, as further indicated by the thickness of the lines in the HVM (see Figure 3) and the quotation by Participant 8:

> [about Facebook Zynga Poker] Well, for example, I would like to change the colour of the cards. It's annoying that two different types of cards have the same colour. […] It is easy to make a mistake. You think you're holding spades and it happens to be clubs. […] That can cost you money. […] You can adjust that the way you like [in PokerStars], so that makes things easier. […] If you have to pick between two sites and one of them is simply a lot more user-friendly, then you will automatically pick that one.

Further, the HVM shows two straightforward and less prominent means-end chains, of which the first connects the ability to find other players with the opportunity to play with friends and/or being entertained. To illustrate, Participant 7 explained, "You can look for people; which is nice. […] This is really ideal; you can keep track of your friends this way". When the interviewer probed for further clarification by asking "Is it important to keep track of your friends?", the participant responded: "Important, no. But it is entertaining".

The second makes a clear association between playing for real money and the seriousness of the game play with the positive experiences that result from playing for skills instead of sheer luck. The semi-professionals associated playing with exercise money on a website like Facebook Zynga Poker with a less serious Poker play attitude and behaviour whereby people easily call. Contrarily, on websites as PokerStars where one typically plays for real money, the game is being

perceived as rational, whereby skills dominate rather than sheer luck. In this context, Participant 6 stated:

> You have to play for money, because if you don't, then people do not take the game seriously. Even if it's only five cent, that doesn't matter. As long as there is something on the line, people will take the game seriously. Here [Facebook Zynga Poker], nobody takes the game seriously. They go all-in whenever they feel like it. That's not real Poker.

When the interviewer responded by resuming, "So it is important that people take the game seriously?", Participant 6 responded:

> Well, if they don't, then it isn't Poker. The fact that you can win or lose money, that is a part of the game. Remove that from the game and it is no longer the same game, you know. […] The money changes the game; it changes the way you bluff.

Another example comes from Participant 16 who responded to the interviewer's question "So it is important that you can play for real money?" by stating "Without money you cannot play the game seriously, because the game is all about bluffing." When the interviewer probed for a clarification, Participant 16 responded "Well, in the beginning I played it with my friends. Just for fun. But it gets old so quickly in my opinion. Your bets have to be with real money if you want them to mean something."

Related to the seriousness of the game, an ambiguous trend was observed in the motivations to prefer a game environment with experienced players. On the one hand, it turned out that semi-professionals were looking for experienced players to guarantee serious game play

or to improve skills, while on the other hand, they were also searching for play opportunities with less experienced players in order to increase monetary gains. For instance, when Participant 16 hinted upon the topic of playing with experienced players, the interviewer paraphrased his statement and verified whether the participant found it indeed important to play with professional Poker players. Participant 16 responded: “Not really, but you do become a better player if you often play with them, and you know that there are few fishes [i.e., Poker terminology for someone who does not really know how to play poker] at the table.” Next, the interviewer probed for more explanation, by asking “Is it important for you to play at a high level?” whereupon Participant 16 replied: “Not too high, of course, I still need to win some money, but I have no interest in playing against a bunch of newbies.”

Promotional actions such as bonuses, tournaments or events were an additional motive to attract semi-professionals to PokerStars because of the association with increased opportunities to gain money. To illustrate, Participant 16 explained that bonuses are important because “It’s extra money, it’s a free profit, you know. Easy winnings.” As typical in laddering interviews, the interviewer probed for further explanation. More particularly, the interviewer asked: “Why is that important to you, making extra money or an extra profit?”, to which Participant 16 replied “Because that’s what the game is about, winning some money”.

In sum, the motivational profiles of the semi-professionals expressed a rather balanced network whereby monetary incentives drove their online Poker behaviour and preferences just as much as game-related benefits such as challenge, optimal game play and entertainment, social aspects (play with friends) and skills.

4.3 Professionals' Means-End Chains

From the interviews with the professional online Poker players, dominant means-end chains emerged with a diverse and rich set of attributes and consequences (see Figure 4).

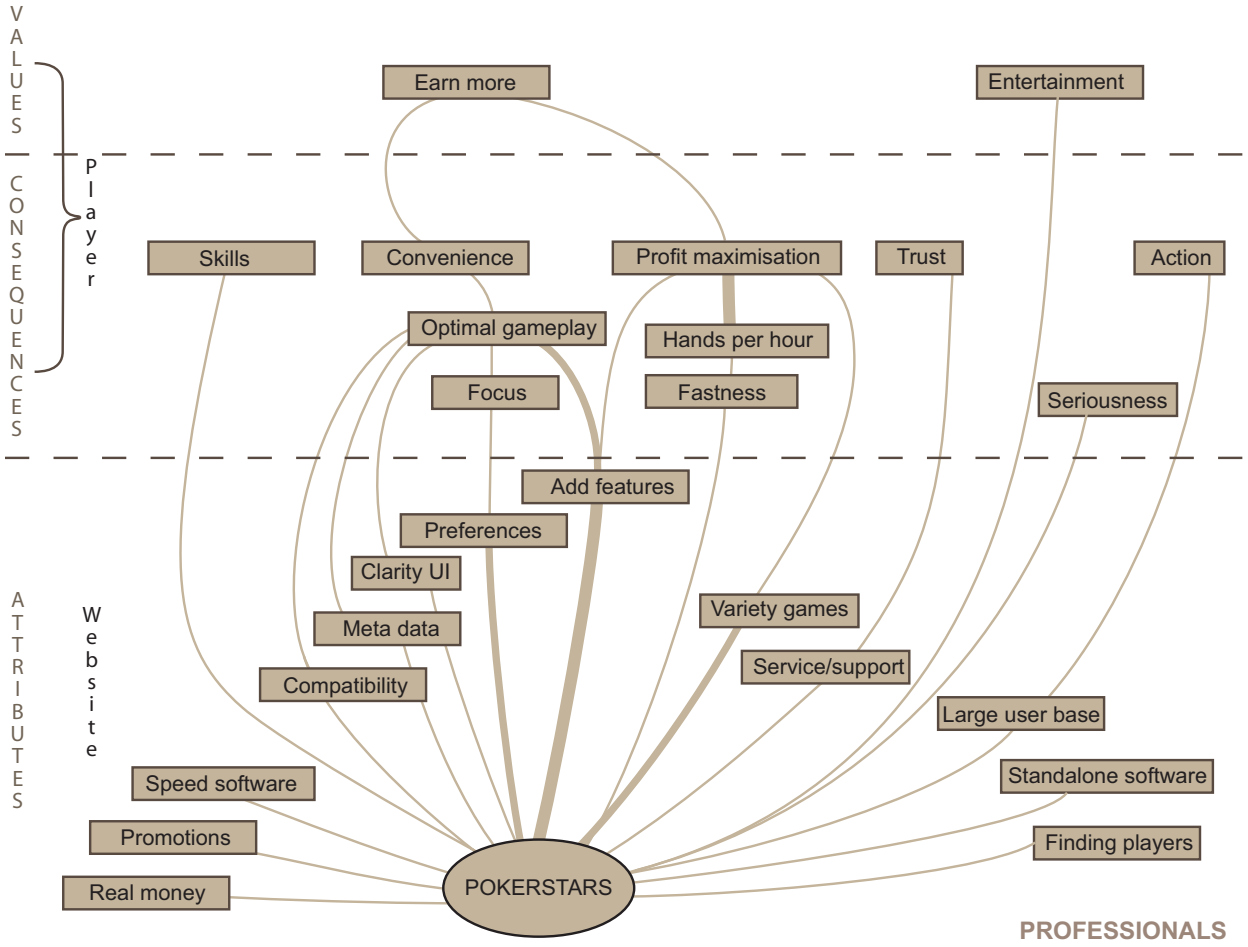

Figure 4 Hierarchical Value Map of the professionals' dominant motivations endorsed for playing online Poker on PokerStars, revealing the importance of earning more money, entertainment, skills, trust and action. The thicker the lines, the stronger the linkages are between two elements.

The professionals' HVM clearly shows the features that are important motives in preferring PokerStars to Facebook Zynga Poker. More particularly, the features relate to the variety of games, preferences, clarity of the user interface (UI) elements, compatibility, meta data (e.g., information obtained via supporting software), large user base, stand alone software, playing with real money, finding other players, the speed of the software, service and support, and promotions (see Figure 4). Some of these attributes were embedded in rather straightforward

means-end chains, such as the means-end chain between service and support and trust. Important aspects hereby were receiving quick, friendly and helpful service, the timely and correctly cashing of money as well as the legality of the website. The following two quotations illustrate this:

> Well, it is nice that you know you will quickly receive an answer, that you feel connected with a site. […] That you feel loyal to them and they to you, […], it comes from both sides. (Participant 4)

> PokerStars is a legal site in Belgium. From January 2012 onwards, it is officially prohibited to play on non-official sites, so that is an important issue […]. In addition, PokerStars is also, on average, the best service. Their support team is always very friendly, very helpful, and that is always helpful […]. (Participant 3)

Another rather straightforward means-end chain comprised the link between the large user base and action, as illustrated by the following quotation:

> […] For me, it [having no access to a large users base] would mean, only playing against Belgians. But the problem is that then, there would be too little action. Here, there are few people that want to play for a reasonable amount of money on a Tuesday afternoon. So then, you can't play enough. I think that it is most logical to play against the whole world then, yeah […] (Participant 4).

The last quote illustrates that a large user base was preferred in order to be engaged in a sufficient level of action on the website all through the day. The interview transcripts revealed another reason why professional Poker players enjoyed a large, international user base. It turned

out that the professionals perceived higher changes to gain money when there were more players involved in Poker games. Interestingly, a similar ambiguous trend was observed as with the semi-professional players as regards their preference for the type of co-players. On the one hand, (semi) professionals enjoyed playing with experienced co-players because they like being challenged and immersed in a serious game play. See for instance, the statement made by participant 3:

> Well, yeah, because, when no serious players are playing, and everyone basically just gives it a go, then it actually is pure gambling […], the aspect of skills diminishes fiercely. When playing gets more seriously, it becomes easier to assess people, and this makes the game more fun and challenging to master.

On the other hand, however, the same (semi) professionals who were eager to exploit and practice their skills were equally driven to search for the least experienced players to increase their financial gains. For instance, Participant 1 stated “In general, people make fewer mistakes in Hold’em nowadays than before, but in Omaha, they still make plenty of mistakes”. When the interviewer responded to this, by asking “Why is it important for you that people make more mistakes in that game, does it have implications for you?”, Participant 1 answered, “Yes, […] I can make more money out of it”.

Relatedly, the professional players turned to websites that offer variation in the choice of Poker games. This variation was perceived as important to find more inexperienced players online, which in turn would increase monetary gains. Note that this contrasts amateur players’ reasons for liking Poker websites that offer variation. For the latter, this characteristic was mainly perceived as important for entertainment and learning motives.

The means-end chain that links particular website features and consequences to reasons related to earning money is most condensed (see Figure 4). Examples of these website features were the availability of meta data, clarity of the UI elements, compatibility of the software with programs as Hold'em Manager or Tournament Shark, personalization/preference options, the great variety of games and, last but definitely not least, the additional features such as hand history, time bank, multi-tabling and searching with filters. This list of attributes was associated with several desirable consequences, namely increased focus on the game (less distraction), game play optimization, convenience, playing more hands per hour and profit maximization. The importance of multi-tabling as an additional Poker website feature was underlined by many professional players and linked to positive benefits as monetary incentives, action and challenge. In this context, Participant 1 explained, "Yeah, the more hands you play, the more you can earn when you are a successful gamer". When the interviewer replied to this by asking "Is there also another reason why you would want to play multiple hands per hour?", Participant 1 laughed and answered "because playing one table seems dull to me… and I simply want a lot of action". As an illustration of how the usability of the software (clarity of UI elements) and personalization (preference) options were perceived as beneficial for gaining more money, Participant 2 explained that "If you can direct your attention better, you can make better decisions, you will make less mistakes, and you'll earn more in the long run". Participant 4 also referred to the importance of the usability of the software and personalization options:

> The cards are laid on the table much faster [in PokerStars] and a new hand is played faster in PokerStars […]. In PokerStars, you can do a lot of things in your own way […]. You can still choose between twenty different lobbies […]

> it is important that you can find a colour that you like […] it [PokerStars] is rather calming to me when I compare it to that [Facebook Zynga Poker], yes.

According to the laddering protocol, the interviewer reminded the latter participant to clarify the importance of it, and therefore asked: "It is important to you that it is calming?", to which Participant 4 replied: "Certainly, because, when you play a lot, […] it can drive you crazy […]." Later in the interview, Participant 4 further explained the importance of a clear, user-friendly interface:

> I play for my money and when something is more efficient, then, well, look…[…] that means that you can play more hands per hour […]. My winnings depend on how many hands I play […] so I want to play as many hands per hour as possible, using the best software. I want to increase my hourly pay actually.

How the speed of the software could contribute to a better game play and profit maximization, was clearly explained by Participant 3:

> For me personally, that is important because you can play nearly twice as many hands than in a normal format. That leads to, theoretically speaking, a double profit per hour, a day or whatever […]. As a matter of fact, it changes the dynamics at the table. People tend to fold more and that makes it easier to win against specific people.

Playing for money and being entertained were the main motivators endorsed by the professionals for playing online Poker, see for instance Participant 2: "And that is what it is all about: gaining more in the long run, so, […] yes, the more money you win, the easier it gets to

live your life […]. It is all about winning, at least for me", or Participant 1, who mentions in addition to earning money, "I still enjoy playing the game very much".

In sum, the dominant means-end chains revealed that professional players preferred online Poker websites such as PokerStars because of particular website attributes that could provide trust and convenience, and via which the Poker players could maximize profit. Additionally, exploiting skills, being engaged in action and entertainment remained important driving factors for professionals to play online Poker.

5. Discussion

Online Poker is increasingly becoming popular. Nevertheless, the number of studies focusing on online Poker is relatively limited. Moreover, new types of gamblers are emerging because of the peculiarities of the online gambling platforms. Whereas previous research has mainly focused on the addictive risks of online gambling, this study is providing complementary insights by focusing on an in-depth understanding of what drives online Poker players and how their motivations are being triggered by Poker website features.

Our laddering study showed that design characteristics of online Poker websites create specific player experiences and differ from one site to another. All participants preferred Poker Stars to Facebook Zynga Poker for a multitude of reasons. The precise reasons vary between the different types of players. Table 3 provides an overview of the high-level motivations endorsed for playing PokerStars as reported by our three types of players, and hereby summarizes the results for RQ1.

Motivation	Type of Online Poker Player		
	A	SP	P
Entertainment	X	X	X
Learning	X		
Friends		X	
Challenge		X	
Optimal Gameplay		X	X
Skills > Luck		X	X
Earn More		X	X
Action			X
Trust			X

Table 3 Overview of the motivations endorsed for preferring PokerStars to Facebook Zynga Poker, as reported by the amateur (A), semi-professional (SP) and professional (P) online Poker players.

RQ1 dealt with the dominant motivations endorsed for playing online Poker in amateur, semi-professional and professional players. The results showed that all groups clearly expressed entertainment reasons for playing online Poker. This finding is in line with McBride and Derevensky (2009) who have shown that the majority of people who participate in online gambling games play for fun and entertainment. When considering other reported motivations, three distinct profiles emerged from our data. The amateur seemed mainly motivated by a desire to learn and have fun. Semi-professional players turned out to have moved beyond learning the game, as they were now looking for challenge, optimal gameplay and having a great time online with friends. They have become interested in earning money while playing, and they now prefer winning through skills as opposed to sheer luck, which are both values that they share with their professional counterparts. Finally, professional players reported that they want to see a lot of action, by playing many opponents at the same time. They also need to be able to put their trust into the online service. As players move from amateur to professional, monetary gains and motivations that are external to the core game play experience of Poker such as trust, tend to grow in importance.

Referring back to Table 1, which provided a summary of previous literature, evidence for five of the six motivations was found in this study: 1) *money* (especially in the semi-professional and professional players), 2) *positive emotions* (related to entertainment and/or challenge, salient in the three groups of players), 3) *convenience* (salient in the three groups of players, clearly linked to the usability of the interface), 4) *socializations* (evidence found in the group of the semi-professionals) and 5) *practice* (dominant motivator in the group of amateur players). In comparing our results to previous work, it should be acknowledged, though, that this study also revealed new insights that were not reported before in literature.

Unique to this study is that the motivations endorsed for playing online Poker were analysed in relation to the Poker website characteristics, as explicitly addressed in RQ2. Interestingly, the results for RQ2 showed three important design aspects, (a) the extra features such as multi-tabling or hand history, (b) the preferences and personalization options, and (c) the usability of the website. The first two aspects were salient in the means-end chains of professional players because of monetary incentives; for the semi-professional players these first two aspects were also favoured for optimizing the game play, partly because of the increase in player attention, which has been addressed as a key element in playing online Poker before (Clement et al., 2012). For the amateur players, however, the user-friendliness of the website was the primary motivation for preferring PokerStars to Facebook Zynga Poker as it could increase both the entertainment value and learning opportunities.

Contrarily to other studies on online gambling, the results of our laddering study did not point in the direction of the mitigation of negative feelings such as escaping from real life problems, relieving anxiety or boredom, neither did it hint upon compulsive use of the Poker website. Although the mitigation of negative emotions was a category of motivations repeatedly

revealed in previous work (see Table 1), we could not confirm this based on our data. This may be due to the fact that 12 out of 18 participants belonged to the semi-professional or professional group of players. In contrast with studies that have revealed a relationship between unstructured time and compulsive Internet behaviour (Klein et al., 2014), the semi-professionals and professionals in our sample showed elements of a structured use of the game and a controlled aim: professionalization. These (semi-) professionals indicated being highly concentrated and adopting well-considered strategies in order to make money in a fair acceptable win-lose ratio. Although high levels of perceived skill and control in online Poker players (Myrseth, Brunborg, & Eidem, 2010) may increase the likelihood of gambling-related distortions (MacKay et al., 2014), our results did not reveal any indications of loss of control, mood modification, severe lack of sleep, total withdrawal from real life or other aspects of risky gambling behaviour. None of our participants mentioned conflicts with partners or family about their playing, nor did they refer to an internal reoccurring longing for lowering the amount of playing time. That urge for professionalization led them toward reliable and legal Poker sites to enable them to grow in their position and perform similar to an employee.

Further, our results could not confirm the prominence of a sociality factor in the group of amateur players (Shead et al. 2008; Griffiths et al. 2010), neither was the desire to be able to multitask with non-poker activities (Griffiths et al., 2010) dominant. Relaxation or feeling lucky (Richard Wood et al. 2007) did not arise as key elements either. When highlighting entertainment as a reason endorsed for playing online Poker, especially the semi-professionals and professionals emphasized their experienced action and being in a state of utmost concentration. The need to focus on the game may explain why online Poker players move away from social and relaxation motivations and withdraw from multitasking activities. In the group of the most

experienced Poker players, a highly functional use of online Poker playing was observed next to entertainment as a motivational cue. This functional approach was linked to the motivational aspect of considering Poker as a financial extra or as the sole source of income. Although professional players and semi-professionals had a strong drive for gaining as much money as possible and this preferably in a short period of time, other aspects such as entertainment, improving and showing off skills, feelings of trust and need for action/excitement were clearly interwoven with the financial goal. Playing for money was not merely an economic and profit seeking action, it contributed immediately to the challenge of the game and severely changed the game play. Players behaved differently, took the game more seriously and more emphasis was laid on true skills. Playing with real or fake money was no mere game setting preference; it was about a whole different game experience, for both (semi-) professionals and amateurs. For the latter, the focus was on getting involved in a more serious game in order to increase learning opportunities. Money was in that way associated with skill. Therefore, gaining money cannot be considered as a purely extrinsic motivation for playing a specific game; when it alters the game experience, it rather functions as an intrinsic motivation.

These findings have important implications for researchers, policy makers and website designers. Our study has shown that insights in what drives various player groups contribute to a better understanding of the phenomenon of online Poker. Whereas many studies have reported on amateur online gamblers, e.g., when for pragmatic reasons students were recruited, this study put the motivational profiles of experienced Poker players in the categories of amateurs and professionals alongside each other. This way, it was shown that (semi-) professional players have different motivations and behaviours, evidencing more structured and controlled gambling behaviour in the absence of negative and compulsive experiences. Based on our findings, we are

advocate to put the negative discourse with respect to online Poker into perspective as professional players are likely to adopt well-considered strategies to make money in a fair acceptable win-lose ratio, whereby structured and legal play scenarios are clearly preferred. As money plays a central role in the online Poker game and therefore cannot be removed without touching upon the core game dynamics, we argue that policy makers and industry should focus on providing the tools to maintain this structured balance between making money, having control and being engaged in the game.

Future research should take a closer look at how online Poker players are motivated differently in terms of intrinsic and extrinsic motivation, as their experience level rises. To compensate for possible bias in our dataset that could be due to the categorization of the online Poker players based on Poker profits, this study should be replicated by selecting Poker players based on skill level (in this study, only experienced online Poker players were recruited) or gambling behaviour (e.g., to be able to compare the results with studies that have focused on the addictive aspects of online Poker). Additionally, as the choice context in a laddering study determines the results, it is advised that another meaningful selection of Poker websites is chosen.

6. Conclusion

Poker behaviour is motivated by a number of interrelated psychological factors. In this laddering study, the motivations endorsed for playing online Poker were researched in relationship to website preferences via a means-end chain laddering approach. It was found that amateurs were mainly motivated by the desire to be entertained as well as for learning. In addition to entertainment, semi-professional players were looking for challenge, optimal gameplay and having a great time online with friends. Semi-professionals also became interested

in earning money while playing, and preferred winning through skill as opposed to sheer luck, which are both values that they shared with their professional counterparts. Other dominant values in the group of professional players were action (by playing many opponents at the same time), entertainment and trust (with regard to the online service provided by the Poker website). Determining factors for (semi)-professionals' online Poker websites preferences were the availability of additional features such as multi-tabling and personalization options to increase game comfort and monetary gains. For the amateur players, the user-friendliness of the website was important, as this was strongly associated with increased entertainment value and learning.

The evidence presented in this article showed for the first time the linkages that exist between the characteristics of online Poker websites and the individual players' psychosocial beliefs. Moreover, the results opened up a more balanced perspective on the professionalization of online Poker, which is not necessarily linked to negative emotions and behaviour. Results revealed that semi-professionals and professionals tend to engage in well-considered, structured and legal play instead, whereby the financial goal was clearly interwoven with motives of entertainment, action, skills, and trust. In this context, the role of playing for real money cannot be considered as a purely extrinsic motivation as it greatly determined the game play dynamics and experiences, and this both in the (semi-) professional and amateur players.

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Figure Captions

Figure 1The common generic means-end chain, consisting of product attributes (A), consequences (C), and values (V).

Figure 2 Hierarchical Value Map of the amateurs' dominant means-end chains, revealing the importance of the clarity of the website's user interface (UI) in preferring PokerStars to Facebook Zynga Poker. The thicker the lines, the stronger the linkages are between two elements (i.e., higher number of direct and indirect linkages reported by the interviewees).

Figure 3 Hierarchical Value Map of the semi-professionals' dominant means-end chains, revealing the importance of specific website features and preferences as a means towards earning more money, being challenged and/or entertained, and this in the light of a general preference of PokerStars to Facebook Zynga Poker. The thicker the lines, the stronger the linkages are between two elements.

Figure 4 Hierarchical Value Map of the professionals' dominant motivations endorsed for playing online Poker on PokerStars, revealing the importance of earning more money, entertainment, skills, trust and action. The thicker the lines, the stronger the linkages are between two elements.